HAER No. MT-82

Baring Creek Bridge Spanning Baring Creek, on Going-to-the-Sun Road Glacier National Park Flathead County Montana

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PHOTOGRAPHS
REDUCED COPIES OF MEASURED DRAWINGS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record National Park Service Department of the Interior Washington, DC 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD

BARING GREEK BRIDGE HAER MT-82

HAER MONT, 15-WEGL

Location:

Spanning Baring Creek on Going-to-the-Sun Road,

approximately forty miles northeast of the park entrance at West Glacier, Glacier National Park, Glacier Gounty, Montana

UTM: Rising Sun Quad. 12/308990/5394700

Date of

Gonstruction:

1931

Structural Type:

Single-span reinforced concrete arch bridge with masonry

facade

Contractor:

A. Guthrie & Go., Portland, Oregon

Engineer:

Bureau of Public Roads

Owner:

Glacier National Park

Use:

Vehicular bridge

Significance:

The Baring Creek Bridge is one of approximately seventeen prominent masonry and concrete structures on Going-to-the Sun Road in Glacier National Park. The 51-mile stretch of scenic road is significant as a unique engineering accomplishment of the early twentieth century, and as the

accomplishment of the early twentieth century, and as the first product of a 1925 cooperative agreement between the National Park Service and the Bureau of Public Roads. As with other structures on the road, the bridge's designers used native stone in an attempt to make it blend with the park scenery. The bridge's arch was also designed large enough to accommodate an existing hiking trail underneath.

Project

Information: Documentation of the Baring Greek Bridge is part of the

Going-to-the-Sun Road Recording Project, conducted during the summer of 1990 under the co-sponsorship of HABS/HAER and Glacier National Park. Researched and written by Kathryn Steen, HAER Historian, 1990. Edited and transmitted by Lola

Bennett, HAER Historian, 1992.

Going-to-the-Sun Road

The Baring Creek Bridge is a 72-foot, single-span arch bridge over Baring Creek on Coing-to-the-Sun Road, a scenic park road that winds through the spectacular mountains and valleys in the middle of Glacier National Park. The fifty-one-mile road, built in sections between 1911 and 1933, and rebuilt during the next two decades, runs east and west through the park. Starting in the west, the road runs from West Glacier along the ten-mile eastern shore of Lake McDonald and then up McDonald Creek for an additional ten miles. About one mile beyond the junction with Logan Creek, the road begins its ascent to Logan Pass. The road climbs at a 6-percent grade, passes through a tunnel, and turns at a major switchback called "The Loop." Following the contours of the sides of Haystack Butte and Pollock Mountain, the road passes over several bridges, culverts, and retaining walls before reaching Logan Pass. The road descends to the east along the sides of Piegan Mountain and Coing-to-the-Sun Mountain before running along the north shore of St. Mary Lake. The road exits the park as it crosses Divide Creek near St. Mary, Montana.

Significance of the Road

Going-to-the-Sun Road is significant as an outstanding engineering feat of the early twentieth century. In addition, the road was the first product of the interagency cooperative agreement between the National Park Service and the Bureau of Public Roads (BPR). The agreement, signed in 1925, allowed the National Park Service to utilize the roadbuilding expertise of the Bureau of Public Roads while still retaining control to protect the landscape.²

Baring Creek Bridge

By 1930, all of Coing-to-the-Sun Road had been constructed except for the ten miles east of Logan Pass. During 1929 and 1930, A.V. Emery, the BPR's resident engineer did the final surveying on the east side in preparation for letting out the contracts. The Park Service and BPR divided the ten miles into two contracts and A. Guthrie & Company of Portland, Oregon, won the contract for the four-and-a-half-mile section of road that ran from the southwest side of Coing-to-the-Sun Mountain to Dead Horse Point. One of the major features on Guthrie's contract was the bridge over the Baring Creek.³

As a result of the agreement between the BPR and the National Park Service, all of the road construction contracts signed after April 1925 contained clauses designed to keep to a minimum the destructive effects of the contruction. These landscape requirements were primarily the work of Thomas C. Vint, the National Park Service's Assistant Landscape Architect. When the bidding date for the east side contracts drew near, Vint reiterated the landscape issues with regard to the Baring Creek Bridge. Vint expressed his admiration for the scenic landscape of the Baring Falls area by vetoing the idea of a campground in the vicinity. In addition, there were some particularly popular hiking trails around Baring Falls that Vint wanted to preserve. 4

Vint's consideration for the area's trails was evident when he wrote to

the Bureau of Public Roads and recommended that the Baring Creek Bridge be sufficiently high enough and long enough to allow the existing hiking trail to fit under the bridge next to the creek. Vint thought that a bridge with a higher arch would also cause less destruction of the natural landscape because it would require less fill on the approach spans.⁵

Once construction of the bridge was underway in June of 1931, contractor Guthrie discovered he needed to place the footings of the bridge several feet lower than the original plans had indicated. The rock near the base of the bridge tended to break loose or crack and Guthrie received permission to dig until he reached rock solid enough to support the bridge. Guthrie excavated about an additional 1000 cubic yards of material and utilized and extra 131 cubic yards of stone as a result of the change in plans.

Cuthrie completed the bridge during 1931 at a cost of \$16,177.76. Two years later, the Bureau of Public Roads and the National Park Service executed their final inspections and formally accepted the bridge.⁷

Description

The Baring Creek Bridge is a single-span reinforced concrete arch bridge with a masonry facade. The bridge is 190' long and has a 20' roadway. The arch itself spans 72'-0" across the Baring Creek and a trail, and is 23'-6" high from the spring line to the top of the guardrail.

ENDNOTES

- 1. See the Historic American Engineering Record report HAER MT-67 on the Going-to-the-Sun Road.
- 2.C.H. Purcell, F.A. Kittredge, J.A. Elliott, T.C. Vint, and C.J. Kraebel, Suggested Procedure for Cooperation Between the National Park Service and the Bureau of Public Roads in Major Traffic-Way Projects Within the National Parks, April 22, 1925 (Record Group 79, National Archives, Washington, D.C.).
- 3.Walter A. Averill, "Benching the Transmountain Highway from Solid Rock Cliffs in Clacier National Park," <u>Pacific Builder and Engineer</u> (May 7, 1932), p. 28.
- 4. Thomas Vint, Assistant Landscape Engineer, National Park Service, to D.R. Hull, Chief Landscape Engineer, National Park Service, undated (c. spring 1925) memorandum (Record Group 79, National Archives, Washington, D.C.).
- 5. Thomas Vint to L.I. Hewes, Deputy Chief Engineer, Bureau of Public Roads, July 22, 1930 (Record Croup 79, National Archives, Washington, D.C.).
- 6.Arno B. Cammerer, Acting Director of the National Park Service, to John H. Edwards, Assistant Secretary of the Department of the Interior, August 26, 1932; Bureau of Public Roads, Final Report, December 2, 1933 (Record Group 79, National Archives, Washington, D.C.).
- 7.Bureau of Public Roads, "Final Report," December 2, 1933 (Record Group 79, National Archives, Washington, D.C.).

BIBLIOGRAPHY

- All correspondence used in this report belongs to Record Group 79, National Archives, Washington, D.C.
- Averill, Walter A. "Benching the Transmountain Highway from Solid Rock Cliffs in Glacier National Park," <u>Pacific Builder and Engineer</u> 7 May 1932, pp. 24-28.
- Bureau of Public Roads. "Final Report," 2 December 1933. (Record Group 79, National Archives, Washington, D.C.).
- Historic American Engineering Record. "HAER MT-67: Going-to-the-Sun Road." (Library of Congress, Washington, D.C.).
- Purcell, C.H., F.A. Kittredge, J.A. Elliott, T.C. Vint, and C.J. Kraebel.

 <u>Suggested Procedure for Cooperation Between the National Park Service</u>

 <u>and the Bureau of Public Roads in Major Traffic-Way Projects Within the National Parks</u>. April 22, 1925 (Record Group 79, National Archives, Washington, D.C.).